

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
20 September 2001 (20.09.2001)

PCT

(10) International Publication Number
WO 01/68045 A1

(51) International Patent Classification⁷: **A61K 7/16**

(21) International Application Number: **PCT/KR01/00207**

(22) International Filing Date: 13 February 2001 (13.02.2001)

(25) Filing Language: **Korean**

(26) Publication Language: **English**

(30) Priority Data:
2000-13636 17 March 2000 (17.03.2000) **KR**
2000-74599 8 December 2000 (08.12.2000) **KR**

(71) Applicant (for all designated States except US): **LG CHEMICAL CO., LTD.** [KR/KR]; 20, Youido-dong, Youngdeungpo-ku, Seoul 150-010 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KIM, Ji, Young** [KR/KR]; 118 Dong 404 Ho, Hanvit Apartment, Eoeun-dong, Yoosung-ku, Daejeon 305-755 (KR).

KIM, Jong, Ho [KR/KR]; 2 Dong 304 Ho, LG Apartment, Doryong-dong, Yoosung-ku, Daejeon 305-340 (KR).
CHANG, Sug, Youn [KR/KR]; 110 Dong 805 Ho, Sejong Apartment, Jeonmin-dong, Yoosung-ku, Daejeon 305-728 (KR).
YUN, Sei, Young [KR/KR]; 922 Dong 903 Ho, Mokdong Apartment, Yangcheon-ku, Seoul 158-050 (KR).

(74) Agent: **LEE, Byung, Hyun**; NEW Seoul Bldg #705, 828, Yeoksam-dong, Kangnam-gu, Seoul 135-081 (KR).

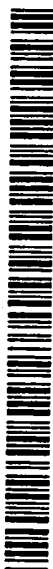
(81) Designated States (national): **BR, CA, CN, ID, IN, JP, KR, MX, US, VN.**

(84) Designated States (regional): European patent (**AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR.**)

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 01/68045 A1

(54) Title: **PATCHES FOR TEETH WHITENING**

(57) Abstract: The present invention relates to a dry type tooth whitening patch comprising peroxide as a tooth whitening agent. In particular, disclosed is a dry type tooth whitening patch in which a peroxide is contained, as a teeth whitening agent, in a matrix type adhesive layer. The adhesive layer includes, as a base polymer thereof, a hydrophilic glass polymer which provides a strong adhesion to teeth while releasing the tooth whitening agent when hydrated on the enamel layers of teeth in the moist oral cavity. The dry type patch according to the present invention is convenient in use, as compared to wet type patches. Further, it exhibits a superior adhesion while being maintained in a state attached to the teeth for a lengthened period of time so as to assure an enough contact time between the whitening agent in the patch and stains on the teeth, thereby giving a sufficient whitening effect.